

Docket No.: 050395-⁸



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

Masuhiko NATSUHARA, et al.

Serial No.: 09/339,826

Filed: June 25, 1999

For: CERAMIC BASE MATERIAL

Group Art Unit: 1755

Examiner: K. Group

REPLY BRIEF

Commissioner for Patents
Washington, DC 20231

Sir:

This Reply Brief is submitted in response to the Examiner's Answer dated April 25, 2001.

ARGUMENT

Appellants submit that the Examiner's rejections under 35 U.S.C. §102/35 U.S.C. §103 are not viable for the reasons set forth in the Appeal Brief submitted March 12, 2001 as supplemented infra.

In the March 12, 2001 Appeal Brief it was argued that the basis of the imposed rejections is predicated upon the theory of inherency. It was stressed that the Examiner's reliance upon the doctrine of inherency is misplaced for two reasons. Firstly, the Examiner did not make out a prima facie case for inherency which requires certainty, not speculation. *Finnegan Corp. v. ITC*, 180 F.3d 1354, 51 USPQ2d 1001 (Fed. Cir. 1999); *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999). Secondly, it was argued that the data in the specification undermine the notion that any sintered aluminum nitride body would necessarily exhibit the uniformity of distribution of sintering agents set forth in independent

claim 1. In this respect, Appellants relied upon the data in Table 2 demonstrating that, notwithstanding overlapping compositions, a difference in the distribution of sintering agents occurs and the distribution of sintering agents impacts warpage.

In the April 25, 2001 Examiner's Answer, the Examiner asserted that the data in Table 1 was considered but did not involve a comparison with the prior art. The Examiner misses the point.

Appellants relied upon the data in Table 2 as factual evidence to undermine the Examiner's reliance upon the doctrine of inherency. Basically, the Examiner has adopted the position that any overlapping compositions would necessarily exhibit the uniformity of distribution of sintering agents specified in independent claim 1. The data in Table 2 demonstrate otherwise. Significantly, the Examiner does not dispute Appellants' position that the data in Table 2 demonstrate that, notwithstanding overlapping compositions, a difference in the distribution of sintering agents occurs and that the distribution of sintering agents impacts warpage. *In re Clinton*, 527 F.2d 1226, 188 USPQ 365 (CCPA 1976).

In the paragraph bridging pages 4 and 5 of the Examiner's Answer, the Examiner asserted that the prior art references teach high thermal conductivity aluminum nitride substrates with controlled warpage. The Examiner then jumped to the conclusion that "It appears if the sintering aids are insufficiently distributed in the sintered body warping (or distortion occurs)" The Examiner's conclusion is not sound.

Firstly, the Examiner failed to comply with the judicial requirement enunciated by the Honorable Board of Patent Appeals and Interferences *in Ex parte Schricker*, 56 USPQ2d, 1723, 1725 (BPAI 2000), wherein it was held that:

....when an examiner relies on inherency, it is incumbent on the examiner to point to the "page and line" of the prior art which justifies an inherency theory.

The mere assertion that the prior art takes steps to control warping or distortion does **not** mean that the prior art aluminum nitride bodies **necessarily** exhibit the **uniformity of distribution of sintering agents** set forth in independent claim 1. Moreover, as pointed out in the Appeal Brief, Yasumoto et al. and JP '265 seek to improve the adhesion strength between aluminum nitride ceramics and a metallized layer. Chiao's production method resides in controlling the purity of the main components in the ceramic layer and metallized layer and controlling the co-fire temperature of the new materials sub-component composition to produce a liquid phase. Sugiura et al. employ a warping correction technique as illustrated in Exhibit A to the Appeal Brief. Harris '261 employs low temperature sintering with a glass additive, while Harris '377 seeks to provide aluminum ceramics which can be sintered at a low temperature and provides a multilayered metallized substrate using a specific glass composition sintering agent.

Appellants do not suggest that there may be other methods of controlling warpage. However, Appellants' invention stems from the discovery that the uniformity of distribution of sintering agents impacts warpage. Hence, the claimed invention resides in controlling the uniformity of distribution of sintering agents. The evidence of record "clearly demonstrates that uniformity of sintering agents doesn't automatically occur. The Examiner has not provided any basis upon which to conclude that an aluminum nitride body having the uniformity of distribution of sintering agents as set forth in claim 1 is disclosed, suggested or even enabled by the applied prior art. Moreover, any reliance of the doctrine of inherency is completely misplaced. The applied prior does **not** place the claimed invention into possession of the public. *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994). The Examiner would improperly deny patentability to the claimed invention based upon speculation. *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 20 USPQ2d 1746 (Fed. Cir. 1991).

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Conclusion

For the reasons set forth *supra.*, and for the reasons set forth in the March 12, 2001 Appeal Brief, Appellants, submit that the imposed rejections under 35 U.S.C. §102/35 U.S.C. §103 are not viable. Appellants, therefore, solicit the Honorable Board to reverse each of the Examiner's rejections under 35 U.S.C. §102/35 U.S.C. §103.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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